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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,086	09/20/2001	Rajiv Doshi	19441-0034	5046
7590	08/10/2004		EXAMINER	
Daniel J Warren Sutherland Asbill & Brennan LLP 999 Peachtree Street N E Atlanta, GA 30309-3996			CHANEY, CAROL DIANE	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,086

Applicant(s)

DOSHI ET AL.

Examiner

Carol Chaney

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

Claims 1-5, 9, and 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Grimble, US Patent 4,729,931 for reasons of record.

Claims 11-16, 20, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Schuler, US Patent 6,303,243 for reasons of record.

Claim Rejections - 35 USC § 103

Claims 6, 10, 27, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimble in view of Barton et al., US 2003/0022050 A1 for reasons of record.

Claims 7, 8, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimble in view of Morrow, Jr. et al., US Patent 4,087,076 for reasons of record.

Response to Arguments

Applicant's arguments filed 10 May 2004 have been fully considered but they are not persuasive.

Applicants assert Grimble does not show "a fuel cell stack having a manifold wherein heat is exchanged between a fuel fluid and an oxidant fluid". As noted by the

applicants, the fuel fluid and the oxidant fluid react along the cell (5). The cell wall (5) is to at least some extent thermally conductive. Therefore, the oxidant and fuel fluids will exchange heat through the cell wall (5), and the limitations of applicant's claims are met. With regards to claim 28, applicant asserts Grimble "does not show exchanging a second heat between a fuel fluid and an oxidant fluid." In response, it is noted that Grimble shows combusting the exhaust gas (13) which is an oxidant/fuel mixtures using the catalytic stack (20). This mixing and combustion exchanges a second heat between the fluids.

Applicant traverses the rejection of claims 6, 10, 27, 33-35 under 35 U.S.C. 103(a) as being unpatentable over Grimble in view of Barton et al., US 2003/0022050 A1 on the grounds that the storage tank is not in fluid communication with a fuel vaporizer. Although this arrangement may not be specifically shown in the Grimble patent, it is clear that, since no other source of fuel is present, the fuel storage tank and the fuel vaporizer must be in fluid communication in order for fuel to be vaporized at the vaporizer.

Applicant traverses the rejection of claims 7, 8, 36, and 37 under 35 U.S.C. 103(a) as being unpatentable over Grimble in view of Morrow, Jr. et al., US Patent 4,087,076 on the grounds that it is not clear how the open apertures of Grimble could accommodate the use of the vacuum chamber shown in Morrow. In response to applicant's argument that it is not clear how the open apertures of Grimble could accommodate the use of the vacuum chamber shown in Morrow, the test for obviousness is not whether the features of a secondary reference may be bodily

incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicants assert Schuler shows no fluid delivered from the "second interior cavity 6". However, as shown in Fig. 1 of the Schuler patent, fluid is clearly delivered from second interior cavity. The cavity could not accept an input of fluid without a fluid flow from the cavity.

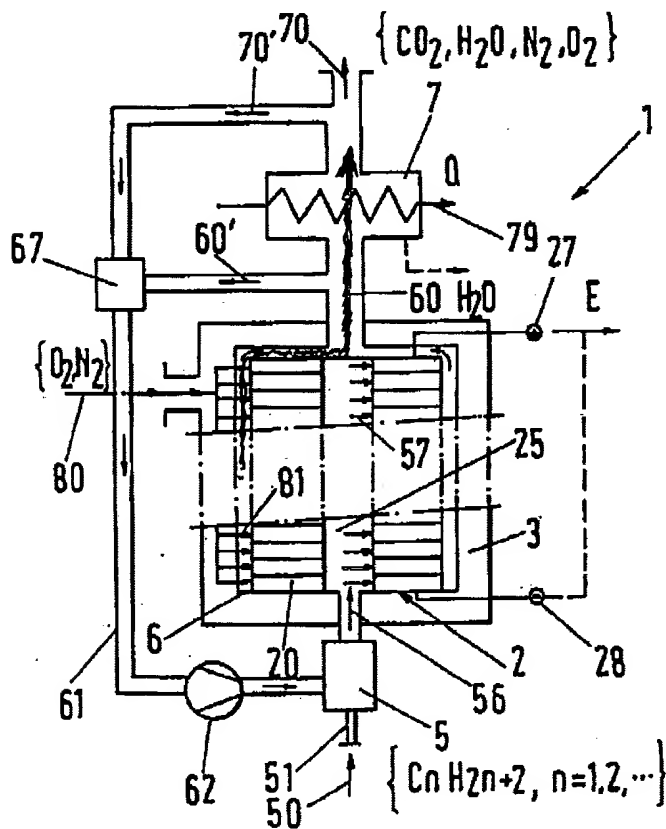


Fig.1

Applicant traverses the rejection of claims 18 and 19 over Schuler on the grounds that the use of solid oxide and proton exchange membrane fuel cells cannot be considered inherent in the disclosure of Schuler. It is respectfully submitted that solid oxide and proton exchange membrane fuel cells were not disclosed as inherent in the disclosure of Schuler. Instead, it was argued that one of ordinary skill in the art would recognize the teachings of Schuler would apply to both solid oxide and proton exchange membrane fuel cells because both types of fuel cells operate at temperatures above ambient.

The responses given above also apply to applicant's traversal of the rejection of claims 17-19, and 22-27 under 35 U.S.C. 103(a) as being unpatentable over Schuler, in view of Piascik et al., US Patent 6,291,08.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol Chaney whose telephone number is (571) 272-1284. The examiner can normally be reached on Mon - Fri 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Carol Chaney
Primary Examiner
Art Unit 1745

9 August 2004